Chapter 7

Review Video

p. 386 #4 $v(t) = 6t^2 - 18t + 12$ $0 \le t \le 2$

a.   Determine when the particle is moving to the right, to the left, and stopped

p. 386 #4 $v(t) = 6t^2 - 18t + 12$ $0 \le t \le 2$

b.   Find the particle's displacement for the given time interval.

p. 386 #4 $v(t) = 6t^2 - 18t + 12$ $0 \le t \le 2$
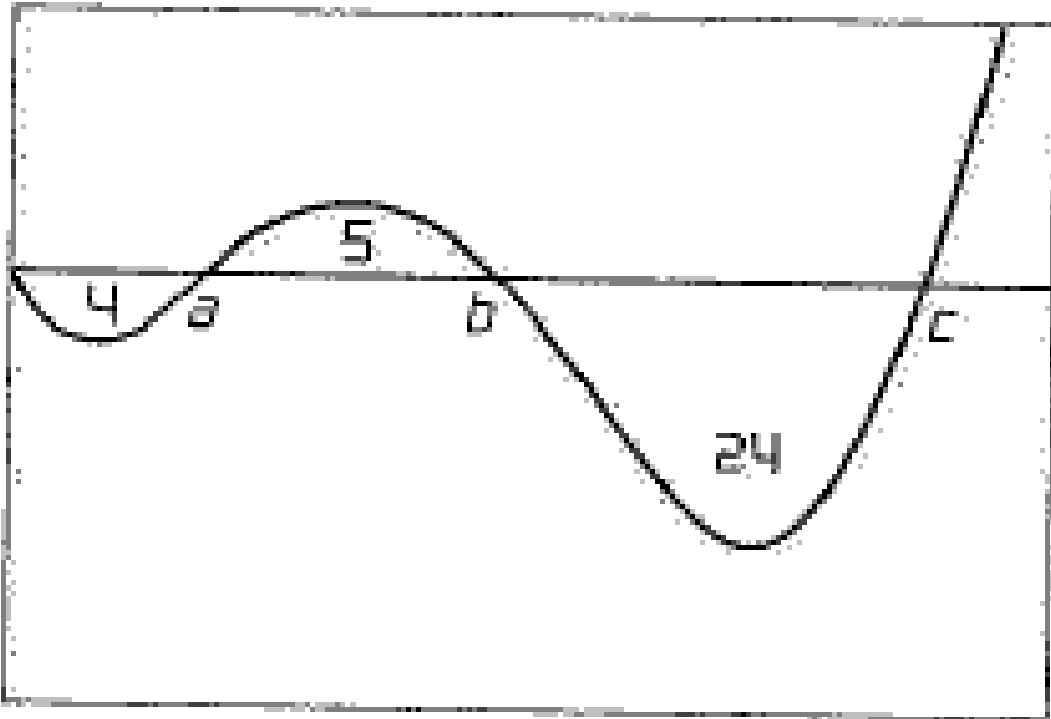
c.   If s(0) = 3, what is the particle's final position?

p. 386 #4 $v(t) = 6t^2 - 18t + 12$ $0 \le t \le 2$
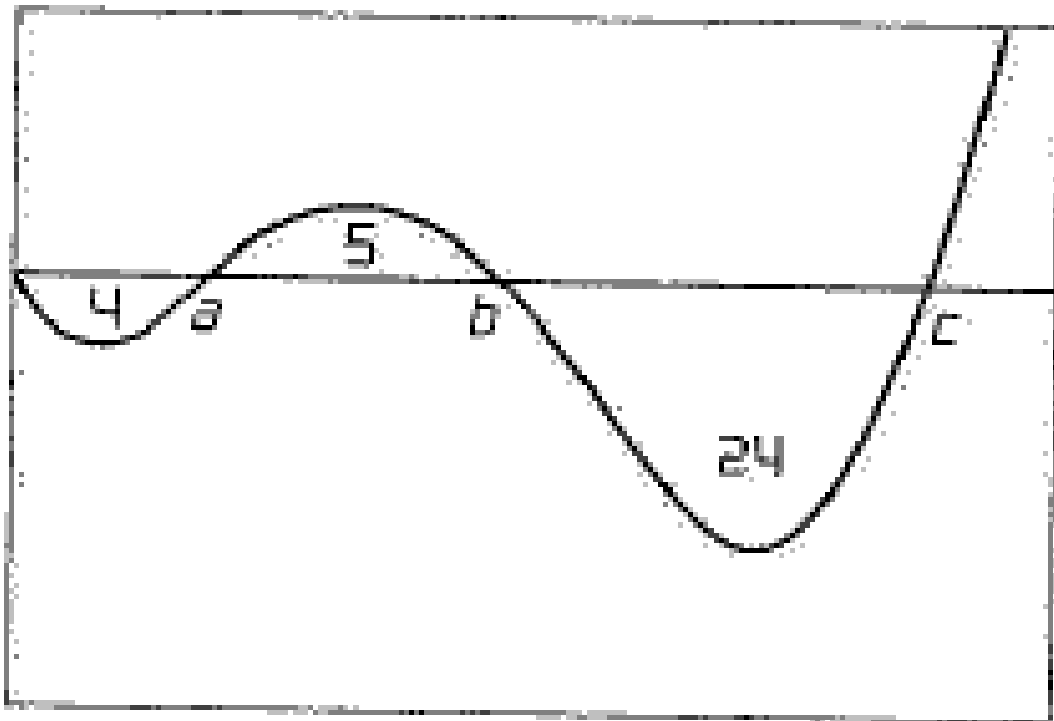
d.   Find the total distance traveled by the particle.

p. 386 #12-16

12.   Below is the velocity graph of a function. What is the particle's displacement between t = 0 and t =c
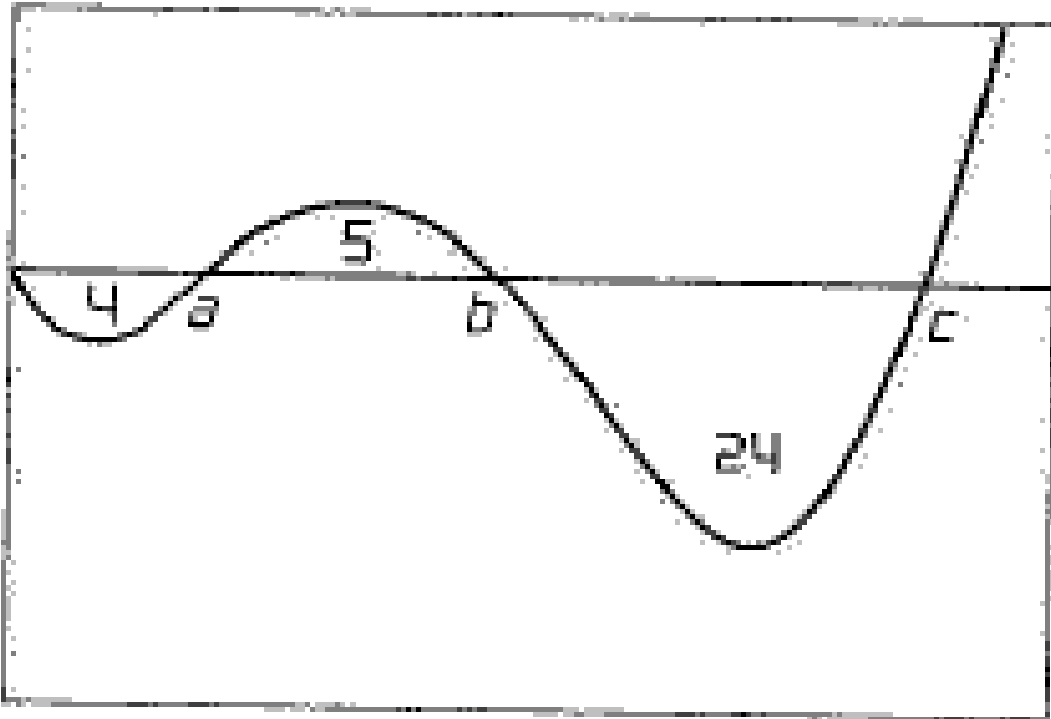
p. 386 #12-16

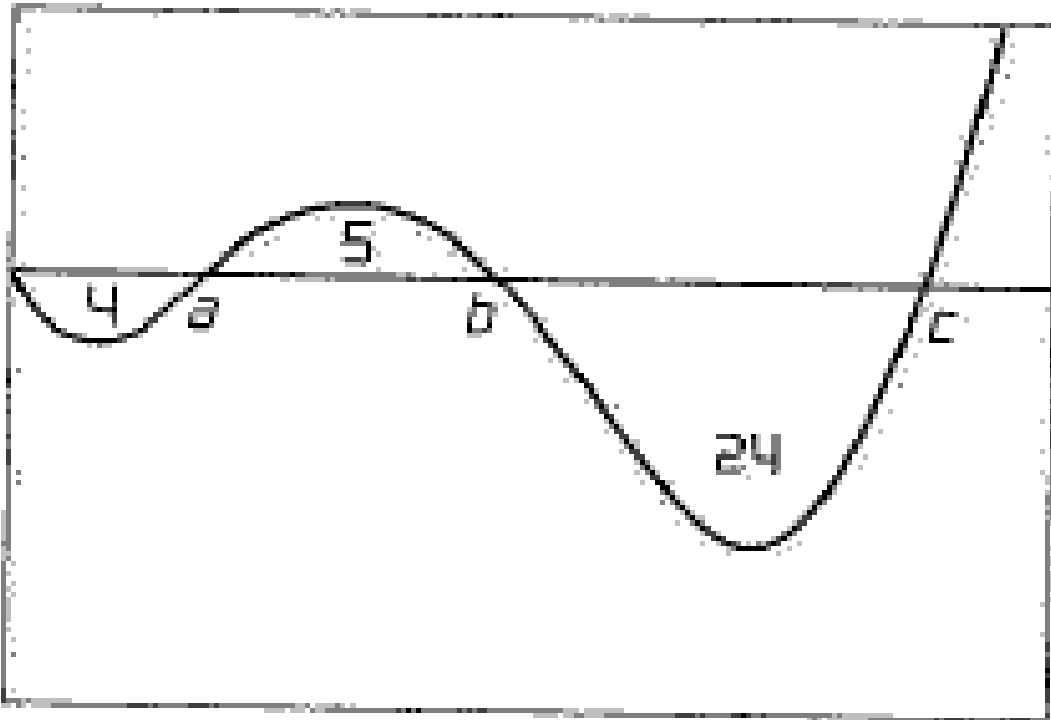13.   Below is the velocity graph of a function. What is the total distance traveled between t = 0 and t =c

p. 386 #12-16

14. Below is the velocity graph of a function. Give the positions of the particle at times a, b, and c if s(0) = 15.
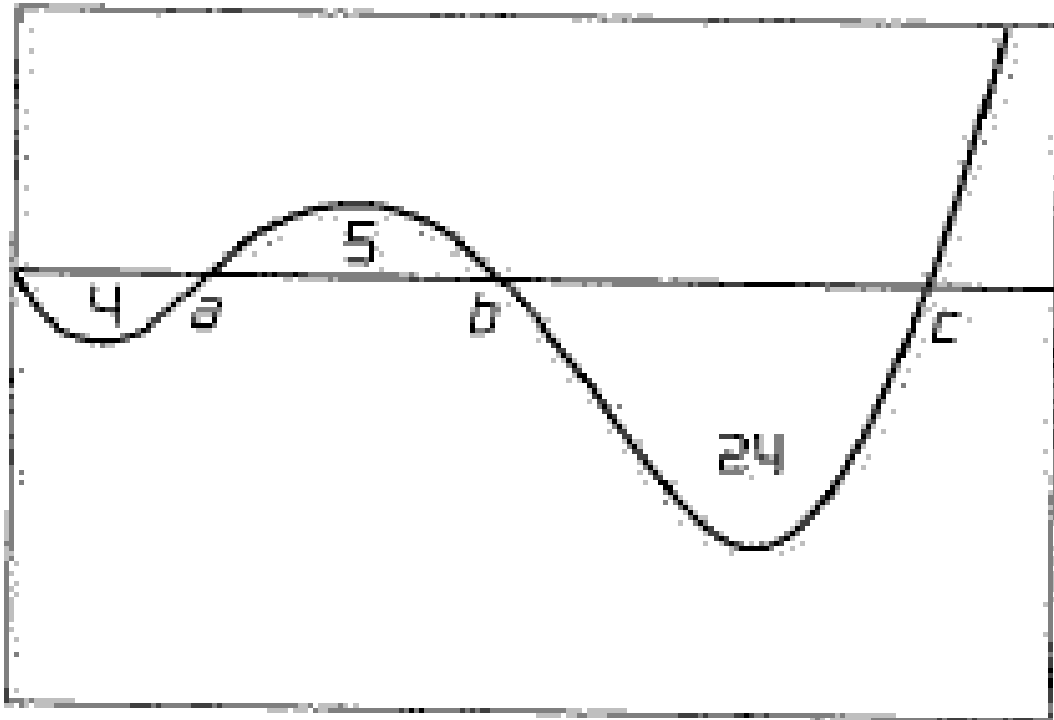
p. 386 #12-16

15.   Below is the velocity graph of a function. Approximately where
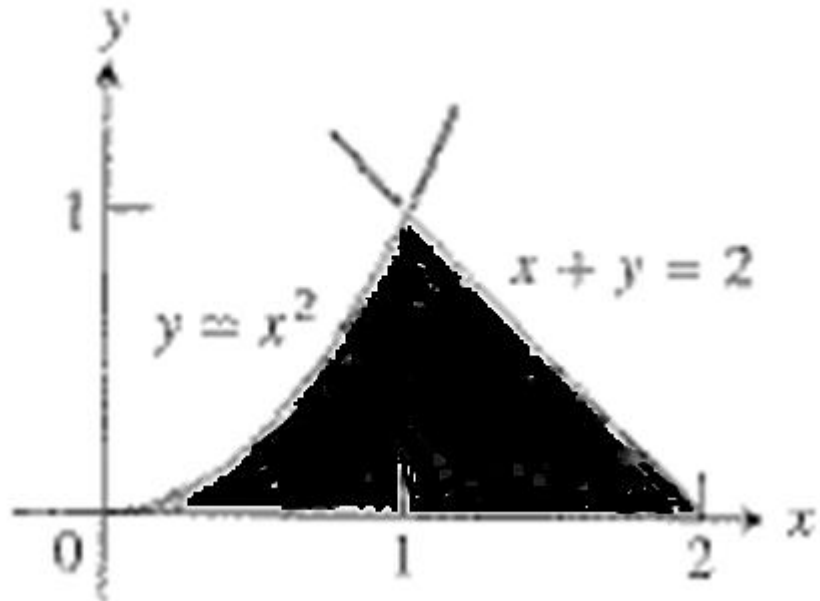   does the particle achieve its greatest   positive acceleration on

p. 386 #12-16

15. Below is the velocity graph of a function. Approximately where does the particle achieve its greatest positive acceleration on the

p. 396 #10   Find the area of the shaded region

10.

$y = x^2$

$x + y = 2$

p. 396 17

Find the area of the region enclosed by the lines and curves

$y = 7 - 2x^2$ and $y = x^2 + 4$

p. 396 24

Find the area of the region enclosed by the lines and curves

$x - y^2 = 0$ and $x + 2y^2 = 3$

p. 407 29a

Find the volume of the solid generated by revolving the region bounded by $y = \sqrt{x}$ and the lines y = 2 and x = 0 about the x-axis

p. 407 29b

Find the volume of the solid generated by revolving the region bounded by $y = \sqrt{x}$ and the lines y = 2 and x = 0 about the y-axis

p. 407 29c

Find the volume of the solid generated by revolving the region bounded by $y = \sqrt{x}$ and the lines y = 2 and x = 0 about the line y =2

p. 407 29d

Find the volume of the solid generated by revolving the region bounded by $y = \sqrt{x}$ and the lines y = 2 and x = 0 about the line x = 4

p. 407 31a

Find the volume of the solid generated by revolving the region bounded by $y = x^2$ and the lines y = 1 about the line y = 1

p. 407 31b

Find the volume of the solid generated by revolving the region bounded by $y = x^2$ and the lines y = 1 about the line y = 2

p. 407 31c

Find the volume of the solid generated by revolving the region bounded by $y = x^2$ and the lines y = 1 about the line y = -1

p. 408 39b

The base of a solid is the region between the curve $y = 2\sqrt{\sin x}$ and the interval $[0, \pi]$ and the x-axis. The cross sections perpendicular to the x-axis are squares with bases running from the x-axis to the curve. Find the volume of the solid.

p. 408 42

The base of a solid is the disk $x^2 + y^2 = 1$. The cross sections by planes perpendicular to the y-axis between y = -1 and y = 1 are isosceles triangles with one leg in the disk.

$x^2 + y^2 = 1$
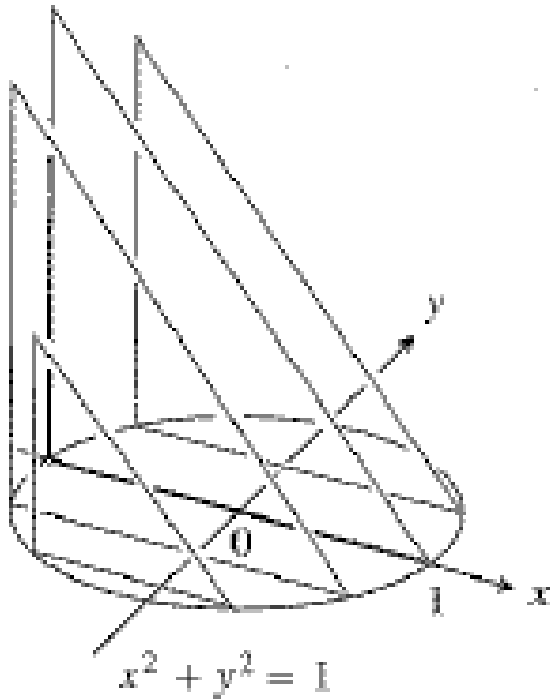
p. 416 #8   Find the length of the curve

$$x = \int_0^y \sqrt{\sec^2 t - 1} \qquad \frac{-\pi}{3} \le y \le \frac{\pi}{4}$$

p. 416 #11   Find the length of the curve

$$y = \frac{1}{3}\left(x^2 + 2\right)^{3/2} \quad x = 0 \text{ to } x = 3$$